

1. Claims renumbered  
37 CFR 1.126

Provisional Amendment of  
National Phase Application  
for PCT/IN00/00023  
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30 1. (Unchanged) An injectable reversible contraceptive comprising a contraceptive polymer, a solvent medium, an electrically conducting material and a magnetic material, characterised in that said contraceptive polymer is from the hydrogel class of polymers, particularly a mixture of styrene maleic anhydride copolymer and styrene maleic acid copolymer, and said solvent medium is dimethyl sulphoxide solvent, and said electrically conducting material is copper in its pure form essentially consisting of microsize particles and macrosize particles, and said magnetic material is iron in its pure form essentially consisting of microsize particles and macrosize particles.

31 2. (Unchanged) A contraceptive as claimed in claim 1, wherein styrene maleic acid copolymer and styrene maleic anhydride copolymer are taken in the ratio varying between 1.5:8.5 to 3:7, preferably 2:8 with respect to each other.

32 3. (Unchanged) A contraceptive as claimed in claim 1, wherein said magnetic material is iron in the form of oxide or a combination with a biologically accepted material, (like) sulphur,

essentially consisting of microsize particles and macrosize particles.

33 ~~A.~~ (Unchanged) A contraceptive as claimed in claim 1, wherein said electrically conducting material and said magnetic material each varies between 3 to 20% by weight of said contraceptive polymer.

34 ~~B.~~ (Unchanged) A contraceptive as claimed in claim 4, wherein said electrically conducting material is taken between 3-8%, preferably between 4-6%, more preferably about 5% by weight of said contraceptive polymer.

35 ~~C.~~ (Unchanged) A contraceptive as claimed in claim 4, wherein said magnetic material is taken between 6-15%, preferably between 8-12%, more preferably about 10% by weight of said contraceptive polymer.

36 ~~D.~~ (Unchanged) A contraceptive as claimed in claim 1, wherein particle size of said microsize particles of said electrically conducting material is about 0.005 to 20 $\mu$ , preferably

about 0.5 to 15 $\mu$  and of said macrosize particles of said electrically conducting material is about 150 $\mu$  to 0.2 mm.

37 ~~8.~~ (Unchanged) A contraceptive as claimed in claim 1, wherein particle size of said microsize particles of said magnetic material is about 0.005 to 15 $\mu$ , preferably about 0.5 to 15 $\mu$  and of said macrosize particles of said magnetic material is upto 0.5 mm.

38 ~~9.~~ (Unchanged) A contraceptive as claimed in claim 1, wherein said microsize and macrosize particles of said electrically conducting material are taken approximately in equal amounts by weight.

39 ~~10.~~ (Unchanged) A contraceptive as claimed in claim 1, wherein said microsize particles of said magnetic material are taken in lower amount as compared to said macrosize particles of said magnetic material.

40 ~~11.~~ (Unchanged) A contraceptive as claimed in claim 1, wherein for every 100 mg of said contraceptive polymer about 200  $\mu$ l of said solvent is taken.

41 ~~12.~~ (Unchanged) A contraceptive as claimed in claim 1,  
wherein said magnetic material is prevented from aggregation by  
suitable coating.

42 ~~13.~~ (Unchanged) A contraceptive as claimed in claim 12,  
wherein said magnetic material is coated with cross-linked styrene  
maleic anhydride copolymer.

43 ~~14.~~ (Unchanged) A contraceptive as claimed in claim 1,  
characterised in that the removal of the contraceptive is achieved  
by external magnetic field, preferably travelling magnetic field  
or alternately by flushing another injection of the said solvent.

44 ~~15.~~ (Amended) A contraceptive as claimed in claim 1,  
characterised in that the contraceptive is heated by  
electromagnetic induction with fields from outside the body, which  
in-turn causes lowering in viscosity of said contraceptive to  
effect the reversal thereof.

45 ~~16.~~ (Unchanged) A contraceptive as claimed in claim 1,  
characterised in that the in-situ flow of the contraceptive after  
injection is controlled by external means, preferably by the

application of a drag force or a propelling force by means of an external magnetic field.

46 17. (Unchanged) A contraceptive as claimed in claim 1, characterised in that the presence of the contraceptive is detected and partly quantified by measuring the residual magnetic field strength from outside the body.

47 18. (Amended) A contraceptive as claimed in claim 1, characterised in that said external means include imaging by ultrasound, X-ray, CAT scan, MRI and scanning electrical impedance plethysmography.

48 19. (Amended) A process for preparation of a contraceptive characterised by dissolving the weighed quantities of styrene maleic anhydride copolymer, styrene maleic acid copolymer, said electrically conducting material and said magnetic material in said solvent medium, particularly in dimethyl sulphoxide followed by keeping the complex solution of said copolymers, said electrically conducting material and said magnetic material in an inert environment, preferably in nitrogen atmosphere and shaking for about 45-50 hrs by maintaining the temperature at about 35°C.

49 20. (Unchanged) A process for preparation of a  
contraceptive, as claimed in claim 19, wherein said magnetic  
material is preferably coated magnetic material.

50 21. (Unchanged) A process for preparation of a  
contraceptive, as claimed in claim 19, wherein said copolymers,  
and said electrically conducting material and said magnetic  
material are first mixed and then dissolved in said solvent.

51 22. (Unchanged) A process for preparation of a  
contraceptive, as claimed in claim 19, wherein said copolymers,  
and said electrically conducting material and said magnetic  
material are directly dissolved in said solvent followed by  
mixing.

52 23. (Unchanged) A process for preparation of a  
contraceptive, as claimed in claim 19, wherein said copolymers are  
first mixed and then dissolved in said solvent followed by  
addition of said electrically conducting material and said  
magnetic material.

53 ~~24.~~ (Amended) A process for preparation of a contraceptive,  
as claimed in claim 19, wherein said electrically conducting  
material and said magnetic material are added either together or  
one after the other.

54 ~~25.~~ (New) A process for preparation of a contraceptive, as  
claimed in claim 23, wherein said electrically conducting material  
and said magnetic material are added either together or one after  
the other.

REMARKS

Upon entry of the revisions sought by this Preliminary Amendment, the PCT International Application will enter the national stage having twenty five (25) claims. Claims 1 and 19 are the independent claims. Claim 1 is directed to an injectable reversible contraceptive. Claim 19 is directed to a process for preparation of such a contraceptive.

The PCT International Application was originally filed with twenty nine claims. On August 10, 2000, the International Search Report (ISR) issued. Both Category "A" prior art (i.e., documents indicative of the general state of the art that are not considered to be of particular relevance) and Category "X" prior art (i.e.,